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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/785,696	02/16/2001	Thomas G. Anderson	010-00-012	3895

7590 02/14/2005  
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Corrales, NM 87048

EXAMINER

BAUTISTA, XIOMARA L

ART UNIT	PAPER NUMBER
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2179

DATE MAILED: 02/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/785,696

Applicant(s)

ANDERSON, THOMAS G.

Examiner

X L Bautista

Art Unit

2179

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Prosecution Reopened*

1. Prosecution has been reopened for it has been decided Schena et al reference is not necessary. However, reference Rosenberg still applies and a new non-final rejection is therefore made based on Rosenberg and new reference Wies et al.

### *Response to Arguments*

2. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by *Rosenberg* (US 6,259,382 B1).

Claims 1, 6 and 20:

Rosenberg discloses a method of providing user control of interaction in a computer display of an item (abstract; col. 3, lines 56-67; force feedback interface allows a user to provide input to a computer; the input and force feedback is provided for position control such as positioning a cursor or other graphical object); displaying a portion of the item (col. 4, lines 54-59; isometric function can include such tasks as scrolling a displayed document or zooming a displayed view); determining if a user-positioned cursor is within a threshold distance from an interaction boundary within the display (col. 10, lines 25-28; the computer system provides force feedback to a puck (mouse) when the user moves the graphical object (cursor) against a generated surface such as an edge of a window (boundary), a virtual wall, etc.); applying a force to the cursor and communicating the force to the user (col. 10, lines 29-33; the user feels that the puck and the graphical object are contacting real surfaces; the user feels

restoring or spring forces on the puck); determining an input responsive force applied by the user to the input device (col. 4, lines 1-17; users can apply input force to the physical object (puck; mouse); the input force is determined based on the movement detected by the sensor); changing the portion of the item displayed, wherein the rate of change is determined from the input responsive force (col. 4, lines 1-62; users are enabled to scroll documents; scrolling changes the portion of the document that is being displayed and the rate of change depends on the force applied by the user).

Claims 2 and 3:

See claim 1. Rosenberg teaches changing the portion (scrolling; zooming) of a displayed item (document; view), (col. 4, lines 54-59; col. 34, lines 57-65).

Claims 4 and 9:

See claim 1. Rosenberg teaches the rate of change is determined from the input responsive force (col. 4, lines 1-62; users are enabled to scroll documents; scrolling changes the portion of the document that is being displayed and the rate of change depends on the force applied by the user).

Claim 5:

See claim 1. Rosenberg teaches scrolling a document. Scrolling in the direction of the top boundary is disabled when the top of the document is displayed and scrolling in the direction of the bottom boundary is disabled when the bottom of

the document is displayed; and scrollers are disabled when the whole document is displayed because there is nothing to scroll (all inherent).

Claim 7:

See claim 4. See further: abstract; col. 4, lines 1-62.

Claim 8:

See claim 1. Rosenberg teaches a haptic space (col. 25, lines 42-64).

Claim 10:

Rosenberg teaches a control portion that is activated responsive to direction of the user (abstract; col. 2, lines 3-42; col. 4, lines 1-16; col. 7, lines 33-48).

Claim 11:

See claim 1. Rosenberg teaches determining if a haptic cursor is within the control portion. Rosenberg teaches moving the cursor responsive to user control of an input device and determining if such movement moves the cursor within the control portion (col. 4, lines 1-62; col. 10, lines 25-33).

Claim 12:

See claim 11. Rosenberg teaches detecting an indication from the user to move the cursor into the control portion (col. 4, lines 1-62; col. 9, lines 55-64; col. 10, lines 24-33).

Claim 13:

See claim 1. Rosenberg teaches haptic boundaries separating the control portion from the remainder of the haptic space (col. 10, lines 24-33).

Claims 14 and 16:

See claims 1 and 11-13. See further: col. 4, lines 1-62; col. 9, lines 55-64; col. 10, lines 24-33.

Claim 15:

See claim 14. See further: abstract; col. 3, lines 56-67; col. 4, lines 54-59; col. 6, lines 51-67; col. 10, lines 29-33. Rosenberg teaches an active restoring force that imparts a feeling of resistance or obstruction to movement of the user object (col. 44, lines 14-26). Rosenberg teaches physical forces used for providing haptic sensory cues on the input device (col. 25, lines 42-61).

Claims 17-19:

Rosenberg teaches computer-executable instructions are stored for performing the invention (col. 17, lines 6-8; col. 18, lines 15-19; col. 27, lines 42-54).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Rosenberg* and *Wies et al* (US 6,353,850 B1).

Claims 22 and 23:

See claim 14. Rosenberg teaches a simulated 3D virtual space and an input device moveable by the user in a three-dimensional space characterized by x, y, and z dimensions (col. 15, lines 46-67; col. 16, lines 1-8) but fails to teach a three-dimensional control zone having a portion of the three-dimensional space defined by x, y, and z coordinates and an active region defined by x, y, and z coordinates, with the z coordinate not identical to the z coordinate of the entry region. However, Wies discloses a method and system for the transmission/reception of information pertaining to force feedback to provide feel in transmitted information such as web pages (abstract; col. 3, lines 7-49). Wies teaches force feedback information used to position a cursor on a layout of a web page (col. 12, lines 51-65); an enclosure or set of forces that occur when the cursor is in or near a geometrically bounded (enclosed) area of the screen (col. 13, lines 9-19, 46-67); scrolling a document (col. 14, lines 23-37); a control area (col. 14, lines 48-59); and a boundary or threshold (col. 15, lines



12-33; col. 28, lines 22-34). Wies teaches a virtual reality 3D graphical environment for interacting with 3D objects, wherein force feedback commands can be provided so that force feedback can be experienced in simulated 3-D space. Embedded force feedback routines for authored force effects can be included in VRML data for a virtual environment so that when the user moves into a virtual wall, an obstruction force is generated on the user-manipulatable object (col. 29, lines 18-38). Therefore, it would have been obvious to one ordinarily skilled in the art at the time the invention was made to modify Rosenberg to include Wies's teaching of using a three-dimensional zone control because it enables the user to control the position of a cursor and feel through physical feedback sensations when the cursor is near to or positioned on an "interesting" object in a 2D environment and also in a 3D environment in order to enhance the sensory experience of the user to provide a richer, more interesting and enjoyable interaction with information received over networks, in CAD programs, video games, etc.

### *Conclusion*

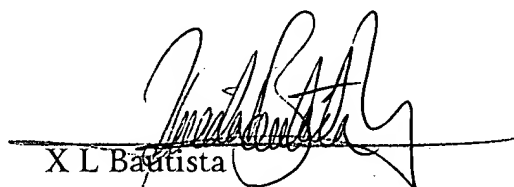
7. The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111(c) to consider these references fully when responding to this action. The

documents cited therein teach (Kubica et al; US 5990869) a computer interface having an input device (mouse) movable along an X-axis or Y-axis, resulting in movement of a cursor on the display; force imparted upon the mouse along the X and Y axis; and provided force feedback based on movement of the mouse and interaction of the cursor with displayed objects; boundaries; and scrolling through information (abstract; col. 1, lines 1-4; col. 2, lines 1-17, 27-38, 48-54; col. 3, lines 30-47; col. 6, lines 8-21, 59-67; col. 7, lines 1-59); and (Barber et al; US 5973,670) a computer cursor control device, method and apparatus for establishing tactile feedback in a cursor control device based on an associated computer's displayed graphical presentation; and boundaries (abstract; col. 1, lines 45-67; col. 2, lines 1-3, 16-23, 60-67; col. 4, lines 21-29, 62-67; col. 5, lines 1-18; col. 6, lines 1-9).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to X L Bautista whose telephone number is (571) 272-4132. The examiner can normally be reached on Monday-Thursday 8:00AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on (7571) 272-4136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
X L Bautista  
Primary Examiner  
Art Unit 2179

xlb  
February 9, 2005